

REMARKS

This matter was submitted for appeal to the Board of Interferences and Appeals and an Appeal Brief has been filed. In response to the Appeal Brief, the Examiner mailed an Office Action setting forth new grounds for rejection under 35 U.S.C. §101. In the Office Action, claims 1, 9 and 18 are rejected as allegedly directed to non-statutory subject matter. Applicant traverses the rejections and respectfully requests withdrawal of the Office Action and resumption of the Appeal process. This response deals specifically with the new §101 rejections. The remaining rejections in the matter have been argued in the Appeal Brief and Applicant incorporates those arguments herein by reference.

The rejections under 35 U.S.C. §101 are improper. “The plain and unambiguous meaning of section 101 is that any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may be patented...” MPEP 2106. The Office Action rejects the claims for allegedly failing to include transformation from one physical state to another and for not producing a tangible result. Furthermore, the Office Action states that “[m]erely calculating the probe float as claimed is [sic] not appear to be sufficient to constitute a tangible result, since the outcome of the calculating step has not been used in a disclosed practical application can be realized [sic].” Such an assertion is clearly erroneous and apparently derive from a superficial reading of the Claims, the Specification and the Drawings and/or a lack of understanding of the field of endeavor.

Each of the independent claims recites a method for calculating or measuring probe float. The methods include acquiring a free-hanging planarity measurement, obtaining a first electrical contact planarity measurement and calculating probe float using results of said acquiring and said obtaining. As illustrated by Fig. 4 and described in the Specification, free hanging planarity is typically obtained when a probe is not electrically connected to the probe card and is free to move vertically in an electrically insulated state. Specification at page 4, lines 29-33 and *see also* page 6, lines 25-33. As described in the Specification, “[e]lectrical planarity measurements are typically made by slowly bringing a conductive contact surface into contact with the probes on a probe card.” Specification at page 1, lines 14-16. Consequently, the steps of acquiring and obtaining involve the moving of a contact surface from a free hanging state to an electrically contacted state, establishing the point or points at which one or more probes make electrical contact and/or until every probe has made

electrical contact. See Specification at page 5, line 13 *et seq.* It should be apparent then, that the methods recited in the claims include a physical transformation of one or more probe pins from a free-hanging state to a state in which electrical contact is established for each of the one or more pins.

Moreover, the results produced by the claimed methods are tangible. The use of probe cards is well understood. For example, probe cards may be used to test an integrated circuit ("IC") by using probe cards to contact selected pads and subsets of pads on the IC and measuring the response of the IC to electrical signals through such contacts. It is well understood by those familiar with electrical circuit theory that probe card testing typically requires that electrical contact is established between the selected pads and corresponding probe pins. Thus, a system that provides accurate information regarding probe float of a probe card enables the probe card to be reliably and optimally positioned to obtain good electrical contact between IC pads and corresponding probe card pins. The alternatives in conventional systems typically include overdriving the probe card or risking non-contact of one or more pins. As is understood by those familiar with probing ICs, overdriving a pin can cause pad damage and/or lateral translation of pins that can result in loss of contact between pin and pad or shorting between adjacent pads.

The claimed methods eliminate problems existing in the prior art. The claimed methods provide results that can be appreciated and utilized by persons involved in testing systems using probe card systems.

Therefore, it should be readily apparent that the claimed methods involve transformation from one physical state to another and produce results that are useful, concrete and tangible. Applicant respectfully requests withdrawal of the rejections. Applicant respectfully requests that the Examiner permit this case to proceed to Appeal.

CONCLUSION

All objections and rejections having been addressed, and in view of the foregoing, the claims are believed to be in form for allowance, and such action is hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, he is kindly requested to contact the undersigned at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

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